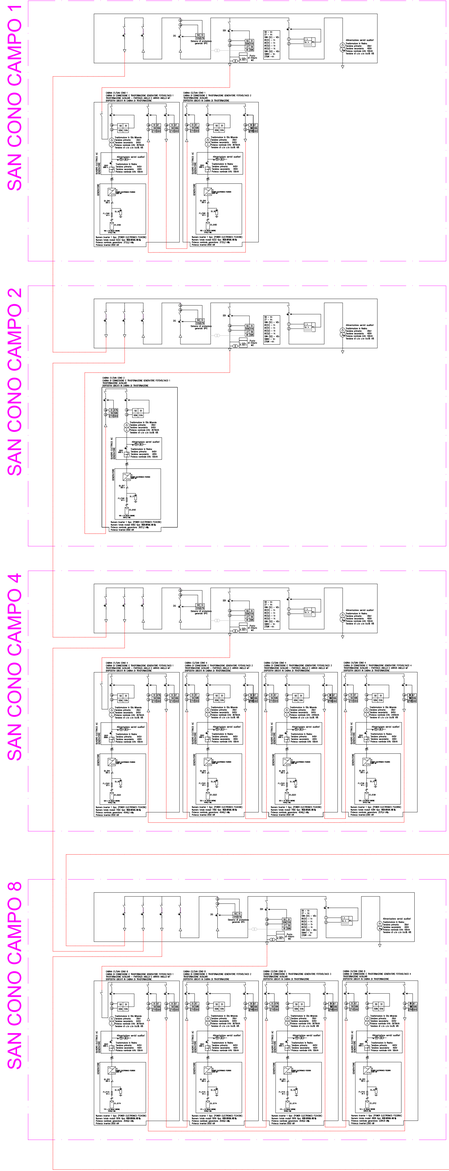



**CONFIGURAZIONE CAMPO FOTOVOLTAICO SAN CONO 1**

| SAN CONO 1 Potenza NOMINALE DC CAMPO 6.936,0 kW | | | | | |
|---|---|---|---|---|---|
| SOTTOCAMPI | 1- 2 | | | | |
| N. stringhe da 34 moduli | 170 | | | | |
| N. moduli | 5780 | | | | |
| Potenza moduli fotovoltaici | 3468 | | | | |
| Potenza inverter | 3550,0 | | | | |
| Potenza in immissione | 3468,0 | | | | |
| Totale stringhe 34 moduli | 340 | | | | |
| N. moduli | 11.560 | | | | |
| Potenza moduli fotovoltaici | 6.936,0 | | | | |
| Potenza inverter | 7.100,0 | | | | |
| Potenza in immissione | 6.936,0 | | | | |

**CONFIGURAZIONE CAMPO FOTOVOLTAICO SAN CONO 6**

| SAN CONO 6 Potenza NOMINALE DC CAMPO 1.672,8 kW | | | | | |
|---|---|---|---|---|---|
| SOTTOCAMPI | 1 | | | | |
| N. stringhe da 34 moduli | 82 | | | | |
| N. moduli | 2788 | | | | |
| Potenza moduli fotovoltaici | 1672,8 | | | | |
| Potenza inverter | 2365,0 | | | | |
| Potenza in immissione | 1672,8 | | | | |
| Totale stringhe 34 moduli | 82 | | | | |
| N. moduli | 2.788 | | | | |
| Potenza moduli fotovoltaici | 1.672,8 | | | | |
| Potenza inverter | 2.365,0 | | | | |
| Potenza in immissione | 1.672,8 | | | | |

**CONFIGURAZIONE CAMPO FOTOVOLTAICO SAN CONO 2**

| SAN CONO 2 Potenza NOMINALE DC CAMPO 3.937,2 kW | | | | | |
|---|---|---|---|---|---|
| SOTTOCAMPI | 1 | | | | |
| N. stringhe da 34 moduli | 193 | | | | |
| N. moduli | 6562 | | | | |
| Potenza moduli fotovoltaici | 3937,2 | | | | |
| Potenza inverter | 3550,0 | | | | |
| Potenza in immissione | 3550,0 | | | | |
| Totale stringhe 34 moduli | 193 | | | | |
| N. moduli | 6.562 | | | | |
| Potenza moduli fotovoltaici | 3.937,2 | | | | |
| Potenza inverter | 3.550,0 | | | | |
| Potenza in immissione | 3.550,0 | | | | |

**CONFIGURAZIONE CAMPO FOTOVOLTAICO SAN CONO 7**

| SAN CONO 7 Potenza NOMINALE DC CAMPO 3.162,0 kW | | | | | |
|---|---|---|---|---|---|
| SOTTOCAMPI | 1 | | | | |
| N. stringhe da 34 moduli | 115 | | | | |
| N. moduli | 5270 | | | | |
| Potenza moduli fotovoltaici | 3162,0 | | | | |
| Potenza inverter | 3550,0 | | | | |
| Potenza in immissione | 3162,0 | | | | |
| Totale stringhe 34 moduli | 155 | | | | |
| N. moduli | 5.270 | | | | |
| Potenza moduli fotovoltaici | 3.162,0 | | | | |
| Potenza inverter | 3.550,0 | | | | |
| Potenza in immissione | 3.162,0 | | | | |

**CONFIGURAZIONE CAMPO FOTOVOLTAICO SAN CONO 4**

| SAN CONO 4 Potenza NOMINALE DC CAMPO 14.239,2 kW | | | | | |
|---|---|---|---|---|---|
| SOTTOCAMPI | 1- 3 | 4 | | | |
| N. stringhe da 34 moduli | 223 | 126 | | | |
| N. moduli | 7582 | 4284 | | | |
| Potenza moduli fotovoltaici | 4549,2 | 2570,4 | | | |
| Potenza inverter | 3550,0 | 2365,0 | | | |
| Potenza in immissione | 3550,0 | 2365,0 | | | |
| Totale stringhe 34 moduli | 698 | | | | |
| N. moduli | 23.732 | | | | |
| Potenza moduli fotovoltaici | 14.239,2 | | | | |
| Potenza inverter | 13.015,0 | | | | |
| Potenza in immissione | 13.015,0 | | | | |

**CONFIGURAZIONE CAMPO FOTOVOLTAICO SAN CONO 8**

| SAN CONO 8 Potenza NOMINALE DC CAMPO 12.933,6 kW | | | | | |
|---|---|---|---|---|---|
| SOTTOCAMPI | 1- 3 | 4 | | | |
| N. stringhe da 34 moduli | 174 | 112 | | | |
| N. moduli | 5916 | 3808 | | | |
| Potenza moduli fotovoltaici | 3549,6 | 2284,8 | | | |
| Potenza inverter | 3550,0 | 2365,0 | | | |
| Potenza in immissione | 3549,6 | 2284,8 | | | |
| Totale stringhe 34 moduli | 634 | | | | |
| N. moduli | 21.556 | | | | |
| Potenza moduli fotovoltaici | 12.933,6 | | | | |
| Potenza inverter | 13.015,0 | | | | |
| Potenza in immissione | 12.933,6 | | | | |

**CONFIGURAZIONE CAMPO FOTOVOLTAICO SAN CONO 9**

| SAN CONO 9 Potenza NOMINALE DC CAMPO 4.018,8 kW | | | | | |
|---|---|---|---|---|---|
| SOTTOCAMPI | 1 | | | | |
| N. stringhe da 34 moduli | 197 | | | | |
| N. moduli | 6698 | | | | |
| Potenza moduli fotovoltaici | 4018,8 | | | | |
| Potenza inverter | 3550,0 | | | | |
| Potenza in immissione | 3550,0 | | | | |
| Totale stringhe 34 moduli | 197 | | | | |
| N. moduli | 6.698 | | | | |
| Potenza moduli fotovoltaici | 4.018,8 | | | | |
| Potenza inverter | 3.550,0 | | | | |
| Potenza in immissione | 3.550,0 | | | | |

**CONFIGURAZIONE CAMPO FOTOVOLTAICO**

| SAN CONO Potenza NOMINALE DC 46.899,6 kW | |
|---|---|
| Totale stringhe 34 moduli | 2.299 |
| N. moduli | 78.166 |
| Potenza moduli fotovoltaici | 46.899,6 |
| Potenza inverter | 46.145,0 |
| Potenza in immissione | 44.819,4 |

SCHEDA TECNICA INVERTER POWER ELECTRONIC FS285K - FS340K

POWER ELECTRONICS

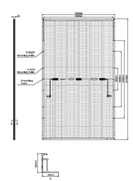
## TECHNICAL CHARACTERISTICS — HEMK 645V

| | | FRAME 1 | FRAME 2 |
|---|---|---|---|
| REFERENCE | | FS285K | FS340K |
| OUTPUT | AC Output Power(kVA/kW) @50°C [1] | 2285 | 3430 |
| | AC Output Power(kVA/kW) @40°C [1] | 2965 | 3550 |
| | Max. AC Output Current (A) @40°C | 2117 | 3175 |
| | Operating Grid Voltage(VAC) [2] | 645V ±10% | |
| | Operating Grid Frequency(Hz) | 50Hz/60Hz | |
| | Current Harmonic Distortion (THDI) | < 3% per IEEE519 | |
| | Power Factor (cosfie phi) [3] | 0.5 leading ... 0.5 lagging adjustable / Reactive Power Injection at night | |
| INPUT | MPPt @full power (VDC) @35°C [4] | 913V-1500V | |
| | MPPt @full power (VDC) @50°C [4] | 913V-1310V | |
| | Maximum DC voltage | 1500V | |
| | Number of PV Inputs [5] | Up to 26 | |
| | Number of Fisermag DC/CC inputs [5] | Up to 5 | |
| | Max. DC continuous current (A) [6] | 2645 | 3970 |
| | Max. DC short circuit current (A) [6] | 4000 | 6000 |
| EFFICIENCY & AUXILIARY SUPPLY | Efficiency (Max) (η) | 98.81% | 98.87% |
| | Euroeta (η) | 98.43% | 98.60% |
| | Max. Power Consumption (KVA) | 8 | 10 |
| CABINET | Dimensions (WxDxH) (ft) | 12 x 7 x 7 | |
| | Dimensions (WxDxH) (m) | 3.7 x 2.2 x 2.2 | |
| | Weight (lb) | 12125 | 12677 |
| | Weight (kg) | 5500 | 5750 |
| ENVIRONMENT | Type of ventilation | Forced air cooling | |
| | Degree of protection | NEMA 3R - IP55 | |
| | Permissible Ambient Temperature | -35°C to +60°C / -50°C Active Power derating | |
| | Relative Humidity | 4% to 100% non condensing | |
| | Max. Altitude (above sea level) | 2000m; <3000m power derating (Max. 4000m) | |
| | Noise level [8] | < 79 dBA | |
| CONTROL INTERFACE | Communication protocol | Modbus TCP | |
| | Plant Controller Communication | Optional | |
| | Keyed ON/OFF switch | Standard | |
| PROTECTIONS | Ground Fault Protection | GFDI and isolation monitoring device | |
| | General AC Protection | Circuit Breaker | |
| | General DC Protection | Fuses | |
| | Overvoltage Protection | AC, DC Inverter and auxiliary supply type 2 | |
| CERTIFICATIONS | Safety | UL1741, CSA 22.2 No.107.1-16, UL62109-1, IEC62109-1, IEC62109-2 | |
| | Compliance | NEC 2017 / IEC | |
| | Utility interconnect | EEE 1547.1:2005 / UL1741SA-Feb. 2018 / IEC62116:2014 | |

SCHEDA TECNICA MODULI FOTOVOLTAICI RISEN RSM 120-8-600BMDG

risen energy

**Dimensions of PV Module** (unit: mm)




**ELECTRICAL DATA (STC)**

| Model Number | RSM154-595BDG | RSM154-600BDG | RSM154-605BDG | RSM154-610BDG | RSM154-615BMDG |
|---|---|---|---|---|---|
| Rated Power in Watts-Pmax (Wp) | 595 | 600 | 605 | 610 | 615 |
| Open Circuit Voltage-Voc(V) | 40.90 | 41.10 | 41.30 | 41.50 | 41.70 |
| Short Circuit Current-Isc(A) | 18.09 | 18.11 | 18.16 | 18.21 | 18.26 |
| Maximum Power Voltage-Vmpp(V) | 34.04 | 34.22 | 34.42 | 34.60 | 34.80 |
| Maximum Power Current-Impp(A) | 17.05 | 17.10 | 17.18 | 17.20 | 17.25 |
| Module Efficiency (%) * | 20.5 | 20.7 | 20.8 | 21.0 | 21.2 |

STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3.
Bifacial factor : 75%±5 * Module Efficiency (%) Rounded off to the nearest number

**Electrical characteristics with 10% rear side power gain**

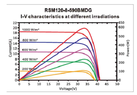
| Total Equivalent power-Pmax (Wp) | 638 | 644 | 649 | 655 | 660 |
|---|---|---|---|---|---|
| Open Circuit Voltage-Voc(V) | 40.90 | 41.10 | 41.30 | 41.50 | 41.70 |
| Short Circuit Current-Isc(A) | 19.87 | 19.92 | 19.98 | 20.03 | 20.09 |
| Maximum Power Voltage-Vmpp(V) | 34.04 | 34.22 | 34.42 | 34.60 | 34.80 |
| Maximum Power Current-Impp(A) | 18.76 | 18.81 | 18.87 | 18.92 | 18.98 |

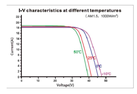
Rear side power gain: The additional gain from the rear side compared to the power of the front side at the standard test condition, it depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

**ELECTRICAL DATA (NMOT)**

| Model Number | RSM154-595BDG | RSM154-600BDG | RSM154-605BDG | RSM154-610BDG | RSM154-615BMDG |
|---|---|---|---|---|---|
| Maximum Power-Pmax (Wp) | 439.5 | 443.1 | 447.0 | 450.7 | 454.6 |
| Open Circuit Voltage-Voc (V) | 38.04 | 38.22 | 38.41 | 38.60 | 38.78 |
| Short Circuit Current-Isc (A) | 14.61 | 14.65 | 14.69 | 14.93 | 14.97 |
| Maximum Power Voltage-Vmpp (V) | 31.59 | 31.76 | 31.94 | 32.11 | 32.29 |
| Maximum Power Current-Impp (A) | 13.91 | 13.95 | 13.99 | 14.04 | 14.08 |

NMOT: Irradiance at 800 W/m², Ambient Temperature 20°C, Wind Speed 1 m/s.




**MECHANICAL DATA**

| | |
|---|---|
| Solar cells | Monocrystalline |
| Cell configuration | 120 cells (6×10+6×10) |
| Module dimensions | 2172×1303×35mm |
| Weight | 35kg |
| Superstrate | High Transmission, Low Iron, Tempered ARC Glass |
| Substrate | Tempered Glass |
| Frame | Anodized Aluminium Alloy type 6005-2T6, Silver Color |
| J-Box | Potted, IP68, 1500VDC, 3 Schottky bypass diodes |
| Cables | 4.0mm² (12AWG), Positive(+)350mm, Negative(-)300mm (Connector Included ) |
| Connector | Risen Twinsel PV-SY02, IP68 |

**TEMPERATURE & MAXIMUM RATINGS**

| | |
|---|---|
| Nominal Module Operating Temperature (NMOT) | 44°C±2°C |
| Temperature Coefficient of Voc | -0.25%/°C |
| Temperature Coefficient of Isc | 0.04%/°C |
| Temperature Coefficient of Pmax | -0.34%/°C |
| Operational Temperature | -40°C~+85°C |
| Maximum System Voltage | 1500VDC |
| Max Series Fuse Rating | 35A |
| Limiting Reverse Current | 35A |

REGIONE SICILIA

COMUNE DI PIAZZA ARMERINA (EN)

*Livello di progettazione/Level of design*

Progetto Definitivo

*Oggetto/Object*

PROGETTO SAN CONO

Realizzazione impianto agrovoltaico in area agricola di potenza pari a circa 47 MWp nel Comune di PIAZZA ARMERINA (EN)

*Elaborato/Drawing*

SCHEMA ELETTRICO IMPIANTO SAN CONO

| *Formato/Size* | *Scala/Scale* Varie | *Codice/code* MITEPUATAV022A0 |
|---|---|---|
| A0 | *Data/Date* 04/04/2022 | |
| | *Nome file/File name* | |
| *Revision* 00 | *Date* 04/04/2022 | *Description* Prima emissione |

*Commessa/Project order*

Progettazione Impianto Fotovoltaico

*Redatto: Ing. Vincenzo Crucillà* — *Approvato: Ing. Angelo* [illegible]

*Committente/Customer*

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*Progettazione e sviluppo/Planning and development*

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